

09/987464

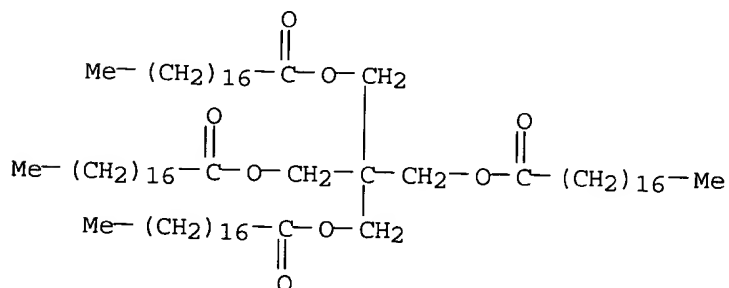
L11 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2003 ACS  
AN 2001:673606 HCAPLUS  
DN 135:249403  
TI Electrophotographic **toner**, two-component electrophotographic  
developer, and method for forming electrophotographic image  
IN Omura, Takeshi; Matsumoto, Yoshiyasu; Kitani, Ryuji; Yamauchi, Yasuko;  
Uchida, Masafumi  
PA Konica Co., Japan  
SO Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
| PI | JP 2001249486 | A2   | 20010914 | JP 2000-61938   | 20000307 |
|    |               |      |          | JP 2000-61938   | 20000307 |

AB The **toner** contains a binder resin, a colorant, and a wax mixt.  
comprising a fatty acid ester having endothermic peaks at 60-105.degree.  
in DSC, a low-m.p. hydrocarbon having the peaks at 60-105.degree., and a  
high-m.p. hydrocarbon wax having the peaks at 120-160.degree.. The  
2-component electrophotog. developer consists of the **toner** and a  
silicone-coated carrier. A latent image on an electrophotog.  
photoconductor is developed by the 2-component developer, transferred to a  
substrate, and fixed by using a heater-involving roller covered with  
5-300-.mu.m fluoropolymer layer showing surface roughness Ra 0.1-1.0 .mu.m  
and a pressing roller covered with 10-500-.mu.m fluoropolymer layer having  
Ra 0.2-2.0 .mu.m. The **toner**, developer, and the method are  
suitable for printing on thick substrates, e.g., cardboards, etc., in an  
app. free from a means of cleaning of the hot roller.

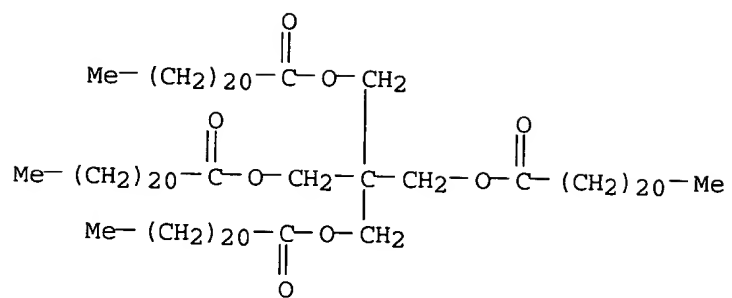
IT 115-83-3, Pentaerythritol tetrastearate 61682-73-3,  
Pentaerythritol tetrabehenate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(wax; **toner** contg. wax mixt. of fatty acid ester and  
hydrocarbons for developer with carrier)

RN 115-83-3 HCAPLUS  
CN Octadecanoic acid, 2,2-bis[[[(1-oxooctadecyl)oxy]methyl]-1,3-propanediyl  
ester (9CI) (CA INDEX NAME)



RN 61682-73-3 HCAPLUS  
CN Docosanoic acid, 2,2-bis[[[(1-oxodocosyl)oxy]methyl]-1,3-propanediyl ester  
(9CI) (CA INDEX NAME)

09/987464



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L11 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:408370 HCAPLUS

DN 137:13203

TI Drop-out printed material for optical character reader formed by electrophotographic orange **toner**

IN Oba, Katsunori; Furukawara, Toshiro; Amagai, Shinji

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
| PI | JP 2002156794 | A2   | 20020531 | JP 2000-354156  | 20001121 |
|    |               |      |          | JP 2000-354156  | 20001121 |

OS MARPAT 137:13203

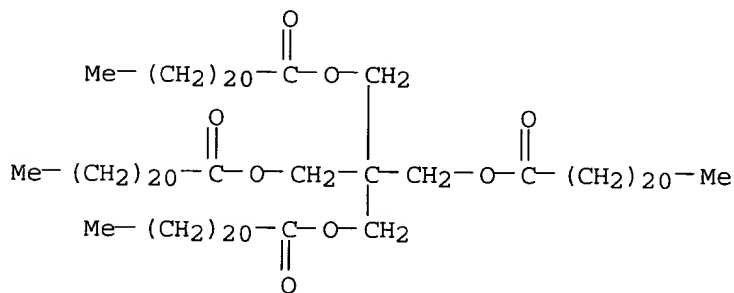
AB The drop-out image for optical character reader, formed by an electrophotog. orange **toner** contg. a binder, an orange colorant or a mixt of a yellow and red colorants, satisfies  $1 - (R_d/R_n) \leq 0.04$  ( $R_d$  = reflectivity of drop-out printed image;  $R_n$  = reflectivity of nonimage part at irradiation of 620 nm light). Orange images with good color saturation for drop-out image for optical character reader are obtained.

IT **61682-73-3**

RL: TEM (Technical or engineered material use); USES (Uses)  
(wax; electrophotog. orange **toner** contg. orange colorant or mixt. of yellow and red colorants for drop-out image formation)

RN 61682-73-3 HCAPLUS

CN Docosanoic acid, 2,2-bis[[[(1-oxodocosyl)oxy]methyl]-1,3-propanediyl ester (9CI) (CA INDEX NAME)



09/987464

=> d fbib kwic hitstr 1-12; fil stnguide

L13 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:904539 HCAPLUS

DN 137:391038

TI Electrostatic image development **toner** showing improved

fixability, offset-resistance, color reproduction, and transparency

IN Sato, Yoshihiro; Ogura, Katsuyuki; Shimada, Katsunori; Sunouchi, Junko

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
|    | -----         | ---  | -----    | -----           | -----    |
| PI | JP 2002341595 | A2   | 20021127 | JP 2001-146439  | 20010516 |
|    |               |      |          | JP 2001-146439  | 20010516 |

OS MARPAT 137:391038

TI Electrostatic image development **toner** showing improved

fixability, offset-resistance, color reproduction, and transparency

AB The title **toner** comprises (1) a **polyester** binder

prepd. from [A] a polybasic acid compd.(s) and [B] an aliph. diol

compd.(s) (excluding bisphenol-A type diol), and (2) an azo prepigment

(C.I. Pigment Yellow 180) and showing a BET sp. surface area of .gtoreq.10

m<sup>2</sup>/g. The **toner** also contains lubricants. The **toner**

shows excellent properties and stable performance.

ST electrophotog **toner** electrog **polyester** binder azo  
pigment

IT Fatty acids, preparation

RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)

(C9-11-branched, glycidyl esters; **polyester** binder in

electrostatic image development **toner** showing improved

fixability, offset-resistance, color reprodn., and transparency)

IT Electrographic **toners**

Electrophotographic **toners**

(electrostatic image development **toner** showing improved

fixability, offset-resistance, color reprodn., and transparency)

IT Carnauba wax

RL: TEM (Technical or engineered material use); USES (Uses)

(lubricant in electrostatic image development **toner** showing

improved fixability, offset-resistance, color reprodn., and

transparency)

IT **Polyesters**, preparation

RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)

(**polyester** binder in electrostatic image development

**toner** showing improved fixability, offset-resistance, color

reprodn., and transparency)

IT 9010-79-1, Viscol 550P **61682-73-3**, Pentaerythritol tetrabenenate

RL: TEM (Technical or engineered material use); USES (Uses)

(lubricant in electrostatic image development **toner** showing

improved fixability, offset-resistance, color reprodn., and

transparency)

IT 77804-81-0P, C.I.Pigment Yellow 180

RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)

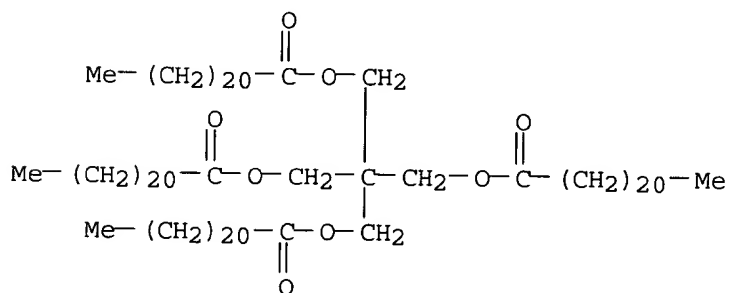
(pigment in electrostatic image development **toner** showing

improved fixability, offset-resistance, color reprodn., and

transparency)

09/987464

- IT 147-14-8, KET Blue 111 980-26-7, Fastogen Super Magenta R  
RL: TEM (Technical or engineered material use); USES (Uses)  
(pigment in electrostatic image development **toner** showing  
improved fixability, offset-resistance, color reprodn., and  
transparency)
- IT 57-55-6DP, Propylene glycol, **polyesters** of 100-21-0DP,  
**Terephthalic acid**, **polyesters** of 107-21-1DP, Ethylene  
glycol, **polyesters** of 126-30-7DP, Neopentyl glycol,  
**polyesters** of 53808-42-7P, Ethylene glycol-neopentyl glycol-  
**terephthalic acid**-trimethylolpropane copolymer 65581-98-8DP,  
Epilcon 830, **polyesters** of 152222-46-3P, Ethylene  
glycol-neopentyl glycol-propylene glycol-**terephthalic acid**  
copolymer 402939-72-4P, Cyclohexanedimethanol-ethylene  
glycol-naphthalenedicarboxylic acid-neopentyl glycol-**terephthalic**  
acid copolymer  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(**polyester** binder in electrostatic image development  
**toner** showing improved fixability, offset-resistance, color  
reprodn., and transparency)
- IT 26576-46-5, 5-Acetoacetyl amino-benzimidazolone 52411-34-4,  
1,2-Bis(2-aminophenoxy)ethane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of azo pigment for electrostatic image development  
**toner**)
- IT 61682-73-3, Pentaerythritol tetrabehenate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(lubricant in electrostatic image development **toner** showing  
improved fixability, offset-resistance, color reprodn., and  
transparency)
- RN 61682-73-3 HCAPLUS  
CN Docosanoic acid, 2,2-bis[[[(1-oxodocosyl)oxy]methyl]-1,3-propanediyl ester  
(9CI) (CA INDEX NAME)

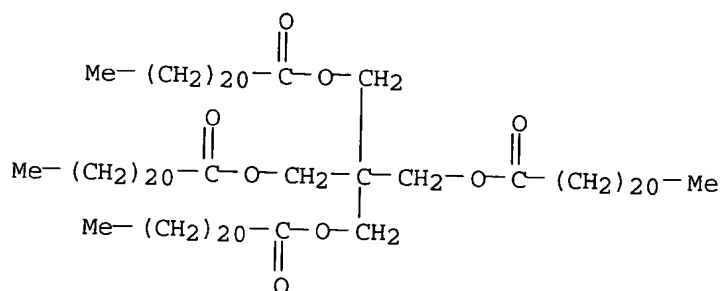


L13 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2003 ACS  
AN 2002:901581 HCAPLUS  
DN 138:9612  
TI Electrostatic image development **toner** showing improved  
fixability, offset-resistance, color reproduction, and transparency  
IN Sato, Yoshihiro; Ogura, Katsuyuki; Shimada, Katsunori; Sunouchi, Junko  
PA Dainippon Ink and Chemicals, Inc., Japan  
SO Jpn. Kokai Tokkyo Koho, 24 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1  
PATENT NO. KIND DATE APPLICATION NO. DATE

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 PI JP 2002341594 A2 20021127 JP 2001-146438 20010516  
 JP 2001-146438 20010516  
 OS MARPAT 138:9612  
 TI Electrostatic image development **toner** showing improved  
 fixability, offset-resistance, color reproduction, and transparency  
 AB The title **toner** comprises (1) a **polyester** binder  
 prepd. from [A] a polybasic acid compd.(s) and [B] an aliph. diol  
 compd.(s) (excluding bisphenol-A type diol), and (2) an azo prepigment  
 (C.I. Pigment Yellow 180) and showing a BET sp. surface area of .gtoreq.10  
 m<sup>2</sup>/g. The **toner** also contains lubricants. The **toner**  
 shows excellent properties and stable performance.  
 ST electrophotog **toner** electrog **polyester** binder azo  
 pigment  
 IT Electrographic **toners**  
 Electrophotographic **toners**  
 (electrostatic image development **toner** showing improved  
 fixability, offset-resistance, color reprodn., and transparency)  
 IT Carnauba wax  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (lubricant in electrostatic image development **toner** showing  
 improved fixability, offset-resistance, color reprodn., and  
 transparency)  
 IT **Polyesters**, preparation  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (**polyester** binder in electrostatic image development  
**toner** showing improved fixability, offset-resistance, color  
 reprodn., and transparency)  
 IT 9010-79-1, Viscol 550P **61682-73-3**, Pentaerythritol tetrabehenate  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (lubricant in electrostatic image development **toner** showing  
 improved fixability, offset-resistance, color reprodn., and  
 transparency)  
 IT 77804-81-0P, C.I.Pigment Yellow 180  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (pigment in electrostatic image development **toner** showing  
 improved fixability, offset-resistance, color reprodn., and  
 transparency)  
 IT 147-14-8, KET Blue 111 980-26-7, Fastogen Super Magenta R  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (pigment in electrostatic image development **toner** showing  
 improved fixability, offset-resistance, color reprodn., and  
 transparency)  
 IT 79293-17-7P, Ethoxylated bisphenol A-ethylene glycol-**terephthalic**  
 acid copolymer 88285-63-6P, Ethylene glycol-propoxylated bisphenol A-  
**terephthalic** acid copolymer 125072-23-3P, Ethylene  
 glycol-propoxylated bisphenol A-**terephthalic** acid-trimethylol  
 propane copolymer 446235-77-4P, Epiclon N 695-ethoxylated bisphenol  
 A-ethylene glycol-**terephthalic** acid copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (**polyester** binder in electrostatic image development  
**toner** showing improved fixability, offset-resistance, color  
 reprodn., and transparency)  
 IT 26576-46-5, 5-Acetoacetyl-amino-benzimidazolone 52411-34-4,  
 1,2-Bis(2-aminophenoxy)ethane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of azo pigment for electrostatic image development  
**toner**)

09/987464

IT **61682-73-3**, Pentaerythritol tetrabehehenate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(lubricant in electrostatic image development **toner** showing  
improved fixability, offset-resistance, color reprodn., and  
transparency)  
RN 61682-73-3 HCAPLUS  
CN Docosanoic acid, 2,2-bis[[(1-oxodocosyl)oxy]methyl]-1,3-propanediyl ester  
(9CI) (CA INDEX NAME)



L13 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2003 ACS  
AN 2002:408370 HCAPLUS  
DN 137:13203  
TI Drop-out printed material for optical character reader formed by  
electrophotographic orange **toner**  
IN Oba, Katsunori; Furukawara, Toshiro; Amagai, Shinji  
PA Dainippon Ink and Chemicals, Inc., Japan  
SO Jpn. Kokai Tokkyo Koho, 14 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN. CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
| PI | JP 2002156794 | A2   | 20020531 | JP 2000-354156  | 20001121 |
|    |               |      |          | JP 2000-354156  | 20001121 |

OS MARPAT 137:13203  
TI Drop-out printed material for optical character reader formed by  
electrophotographic orange **toner**  
AB The drop-out image for optical character reader, formed by an  
electrophotog. orange **toner** contg. a binder, an orange colorant  
or a mixt of a yellow and red colorants, satisfies  $1 - (R_d/R_n)$   
ltoreq.0.04.  
ST electrophotog **toner** orange red yellow colorant; orange  
**toner** dropout image optical character reader; wax binder  
electrophotog orange **toner**  
IT **Polyesters**, preparation  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(binder; electrophotog. orange **toner** contg. orange colorant  
or mixt. of yellow and red colorants for drop-out image formation)  
IT Electrophotographic **toners**  
(electrophotog. orange **toner** contg. orange colorant or mixt.  
of yellow and red colorants for drop-out image formation)  
IT Carnauba wax  
Montan wax  
RL: TEM (Technical or engineered material use); USES (Uses)  
(electrophotog. orange **toner** contg. orange colorant or mixt.

of yellow and red colorants for drop-out image formation)

IT Waxes  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (rice bran; electrophotog. orange **toner** contg. orange colorant or mixt. of yellow and red colorants for drop-out image formation)

IT Bran  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (rice, waxes; electrophotog. orange **toner** contg. orange colorant or mixt. of yellow and red colorants for drop-out image formation)

IT 1324-33-0, C.I. Pigment Red 216  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (C.I. Pigment Red 216; electrophotog. orange **toner** contg. orange colorant or mixt. of yellow and red colorants for drop-out image formation)

IT 53808-42-7P, Ethylene glycol-neopentyl glycol-**terephthalic** acid-trimethylolpropane copolymer 88285-63-6P, Ethylene glycol-polyoxypropylene-(2,2)-2,2-bis(4-hydroxyphenyl)propane-**terephthalic** acid copolymer  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (binder; electrophotog. orange **toner** contg. orange colorant or mixt. of yellow and red colorants for drop-out image formation)

IT 128-69-8, C.I. Pigment Red 224 128-70-1, C.I. Pigment Orange 40  
 475-71-8, C.I. Pigment Yellow 24 980-26-7, C.I. Pigment Red 122  
 1103-38-4, C.I. Pigment Red 49:1 1103-39-5, C.I. Pigment Red 49:2  
 1325-14-0, C.I. Pigment Orange 18 1325-19-5, C.I. Pigment Red 66  
 1325-21-9, C.I. Pigment Red 65 1325-22-0, C.I. Pigment Red 67  
 1326-11-0, C.I. Pigment Yellow 18 1657-16-5, C.I. Pigment Yellow 4  
 2379-77-3, C.I. Pigment Red 189 2387-03-3, C.I. Pigment Yellow 101  
 2425-85-6, C.I. Pigment Red 3 2512-29-0, C.I. Pigment Yellow 1  
 2786-76-7, C.I. Pigment Red 170 2814-77-9, C.I. Pigment Red 4  
 3049-71-6, C.I. Pigment Red 178 3089-17-6, C.I. Pigment Red 202  
 3468-63-1, C.I. Pigment Orange 5 3520-72-7, C.I. Pigment Orange 13  
 3564-22-5, C.I. Pigment Red 18 3573-01-1, C.I. Pigment Red 209  
 3905-19-9, C.I. Pigment Red 166 4028-94-8, C.I. Pigment Yellow 123  
 4051-63-2, C.I. Pigment Red 177 4106-67-6, C.I. Pigment Yellow 5  
 4106-76-7, C.I. Pigment Yellow 6 4118-16-5, C.I. Pigment Yellow 147  
 4216-01-7, C.I. Pigment Yellow 108 4216-02-8, C.I. Pigment Red 194  
 4378-61-4, C.I. Pigment Red 168 4424-06-0, C.I. Pigment Orange 43  
 4531-49-1, C.I. Pigment Yellow 17 4948-15-6, C.I. Pigment Red 149  
 5045-40-9, C.I. Pigment Yellow 109 5102-83-0, C.I. Pigment Yellow 13  
 5160-02-1, C.I. Pigment Red 53:1 5280-66-0, C.I. Pigment Red 48:4  
 5280-67-1, C.I. Pigment Red 133 5280-68-2, C.I. Pigment Red 146  
 5280-74-0, C.I. Pigment Orange 31 5280-78-4, C.I. Pigment Red 144  
 5280-80-8, C.I. Pigment Yellow 95 5281-04-9, C.I. Pigment Red 57:1  
 5468-75-7, C.I. Pigment Yellow 14 5521-31-3, C.I. Pigment Red 179  
 5567-15-7, C.I. Pigment Yellow 83 5580-57-4, C.I. Pigment Yellow 93  
 5580-58-5, C.I. Pigment Yellow 94 5590-18-1, C.I. Pigment Yellow 110  
 5850-80-6, C.I. Pigment Red 68 5858-88-8, C.I. Pigment Orange 19  
 5979-28-2, C.I. Pigment Yellow 16 6041-94-7, C.I. Pigment Red 2  
 6358-31-2, C.I. Pigment Yellow 74 6358-37-8, C.I. Pigment Yellow 55  
 6358-40-3, C.I. Pigment Red 115 6358-47-0, C.I. Pigment Red 114  
 6358-85-6, C.I. Pigment Yellow 12 6358-87-8, C.I. Pigment Red 38  
 6358-88-9, C.I. Pigment Orange 15 6358-90-3, C.I. Pigment Red 42  
 6371-76-2, C.I. Pigment Red 64:1 6371-96-6, C.I. Pigment Orange 1  
 6372-81-2, C.I. Pigment Red 50:1 6373-10-0, C.I. Pigment Red 54  
 6410-09-9, C.I. Pigment Orange 2 6410-10-2, C.I. Pigment Red 1  
 6410-13-5, C.I. Pigment Red 6 6410-30-6, C.I. Pigment Red 8 6410-32-8, C.I. Pigment Red 12  
 6410-35-1, C.I. Pigment Red 10 6410-38-4, C.I.



Pigment Red 9 6410-39-5, C.I. Pigment Red 15 6410-41-9, C.I. Pigment Red 5 6417-83-0, C.I. Pigment Red 63:1 6424-77-7, C.I. Pigment Red 190 6448-95-9, C.I. Pigment Red 22 6448-96-0, C.I. Pigment Red 31 6471-49-4, C.I. Pigment Red 23 6471-50-7, C.I. Pigment Red 14 6471-51-8, C.I. Pigment Red 7 6486-23-3, C.I. Pigment Yellow 3 6505-28-8, C.I. Pigment Orange 16 6505-29-9, C.I. Pigment Red 41 6528-34-3, C.I. Pigment Yellow 65 6528-35-4, C.I. Pigment Yellow 15 6535-46-2, C.I. Pigment Red 112 6655-84-1, C.I. Pigment Red 17 6883-91-6, C.I. Pigment Red 37 6985-92-8, C.I. Pigment Red 175 6985-95-1, C.I. Pigment Red 171 7023-61-2, C.I. Pigment Red 48:2 7585-41-3, C.I. Pigment Red 48:1 12224-98-5, C.I. Pigment Red 81 12225-06-8, C.I. Pigment Red 176 12225-18-2, C.I. Pigment Yellow 97 12225-21-7, C.I. Pigment Yellow 100 12227-62-2, C.I. Pigment Red 193 12227-78-0, C.I. Pigment Red 172 12236-62-3, C.I. Pigment Orange 36 12236-64-5, C.I. Pigment Orange 38 12238-31-2, C.I. Pigment Red 52:2 12768-99-9, C.I. Pigment Orange 42 13515-40-7, C.I. Pigment Yellow 73 14295-43-3, C.I. Pigment Red 88 14359-20-7, C.I. Pigment Yellow 113 15110-84-6, C.I. Pigment Yellow 87 15680-42-9, C.I. Pigment Yellow 129 15782-04-4, C.I. Pigment Orange 17 15782-05-5, C.I. Pigment Red 48:3 15790-07-5, C.I. Pigment Yellow 104 15793-73-4, C.I. Pigment Orange 34 15876-39-8, C.I. Pigment Red 90:1 15876-58-1, C.I. Pigment Red 174 17852-99-2, C.I. Pigment Red 52:1 21405-81-2, C.I. Pigment Yellow 117 22094-93-5, C.I. Pigment Yellow 81 24108-89-2, C.I. Pigment Red 123 29204-84-0, C.I. Pigment Yellow 153 29920-31-8, C.I. Pigment Yellow 120 30125-47-4, C.I. Pigment Yellow 138 31775-16-3, C.I. Pigment Yellow 170 31778-10-6, C.I. Pigment Red 208 31837-42-0, C.I. Pigment Yellow 151 32432-45-4, C.I. Pigment Yellow 98 35355-77-2, C.I. Pigment Red 63:2 36888-99-0, C.I. Pigment Yellow 139 40618-31-3, C.I. Pigment Red 214 43035-18-3, C.I. Pigment Red 247 50326-33-5, C.I. Pigment Red 243 51016-63-8, C.I. Pigment Yellow 173 51868-24-7, C.I. Pigment Red 90 51920-12-8, C.I. Pigment Red 185 52238-92-3, C.I. Pigment Red 242 52846-56-7, C.I. Pigment Orange 62 53815-04-6, C.I. Pigment Yellow 171 56396-10-2, C.I. Pigment Red 150 59487-23-9, C.I. Pigment Red 187 61013-97-6, C.I. Pigment Red 151 61512-61-6, C.I. Pigment Orange 51 61847-48-1, C.I. Pigment Red 188 61968-84-1, C.I. Pigment Yellow 116 63661-26-7, C.I. Pigment Yellow 156 64552-28-9, C.I. Pigment Red 58:4 68016-05-7, C.I. Pigment Red 245 68134-22-5, C.I. Pigment Yellow 154 68227-78-1, C.I. Pigment Red 147 68259-05-2, C.I. Pigment Red 220 68399-99-5, C.I. Pigment Orange 60 68516-73-4, C.I. Pigment Yellow 155 71566-54-6, C.I. Pigment Red 221 71832-85-4, C.I. Pigment Yellow 168 73385-03-2, C.I. Pigment Yellow 169 76233-80-2, C.I. Pigment Yellow 172 77804-81-0, C.I. Pigment Yellow 180 79953-85-8, C.I. Pigment Yellow 128 85702-53-0, C.I. Pigment Yellow 133 104074-25-1, C.I. Pigment Red 83 431991-58-1, Benzenesulfonic acid, 4-chloro-2-[[2-hydroxy-3-[(2-methoxyphenyl)amino]carbonyl]-1-naphthalenyl]azo]-5-methyl-, manganese complex 431991-59-2, Pigment Red 246

RL: TEM (Technical or engineered material use); USES (Uses)  
 (electrophotog. orange **toner** contg. orange colorant or mixt.  
 of yellow and red colorants for drop-out image formation)

IT 9003-07-0, Polypropylene **61682-73-3**

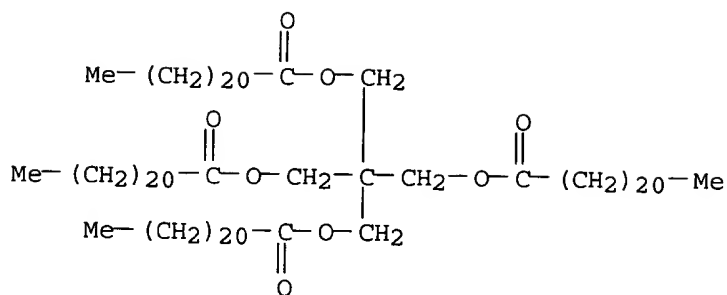
RL: TEM (Technical or engineered material use); USES (Uses)  
 (wax; electrophotog. orange **toner** contg. orange colorant or  
 mixt. of yellow and red colorants for drop-out image formation)

IT **61682-73-3**

RL: TEM (Technical or engineered material use); USES (Uses)  
 (wax; electrophotog. orange **toner** contg. orange colorant or  
 mixt. of yellow and red colorants for drop-out image formation)

RN 61682-73-3 HCAPLUS

CN Docosanoic acid, 2,2-bis[[[(1-oxodocosyl)oxy)methyl]-1,3-propanediyl ester  
 (9CI) (CA INDEX NAME)



L13 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:407180 HCAPLUS

DN 137:13202

TI Electrophotographic orange **toner**

IN Oba, Katsunori; Furukawara, Toshiro; Amagai, Shinji

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
| PI | JP 2002156776 | A2   | 20020531 | JP 2000-354157  | 20001121 |
|    |               |      |          | JP 2000-354157  | 20001121 |

OS MARPAT 137:13202

TI Electrophotographic orange **toner**

AB The **toner** comprises a **polyester** binder resin, wax mainly contg. higher fatty acid ester and/or fatty alc., and a coloring agent contg. an orange colorant or a mixt. of yellow and red colorants. The **toner** shows good antioffset property and gives clear orange images without fog.

ST electrophotog orange **toner polyester** binder; wax  
electrophotog orange **toner**

IT **Polyesters**, preparation

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(binder; electrophotog. orange **toner** contg. orange colorant or mixt. of yellow and red colorants)

IT Electrophotographic **toners**

(electrophotog. orange **toner** contg. orange colorant or mixt. of yellow and red colorants)

IT Carnauba wax

Montan wax

RL: TEM (Technical or engineered material use); USES (Uses)

(electrophotog. orange **toner** contg. orange colorant or mixt. of yellow and red colorants)

IT Waxes

RL: TEM (Technical or engineered material use); USES (Uses)

(rice bran; electrophotog. orange **toner** contg. orange colorant or mixt. of yellow and red colorants)

IT Bran

RL: TEM (Technical or engineered material use); USES (Uses)

(rice, waxes; electrophotog. orange **toner** contg. orange colorant or mixt. of yellow and red colorants)

IT 1324-33-0, C.I. Pigment Red 216

RL: TEM (Technical or engineered material use); USES (Uses)

(C.I. Pigment Red 216; electrophotog. orange **toner** contg. orange colorant or mixt. of yellow and red colorants)

IT 53808-42-7P, Ethylene glycol-neopentyl glycol-**terephthalic** acid-trimethylolpropane copolymer 88285-63-6P, Ethylene glycol-polyoxypropylene-(2,2)-2,2-bis(4-hydroxyphenyl)propane-**terephthalic** acid copolymer

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(binder; electrophotog. orange **toner** contg. orange colorant or mixt. of yellow and red colorants)

IT 128-69-8, C.I. Pigment Red 224 128-70-1, C.I. Pigment Orange 40  
 475-71-8, C.I. Pigment Yellow 24 980-26-7, C.I. Pigment Red 122  
 1103-38-4, C.I. Pigment Red 49:1 1103-39-5, C.I. Pigment Red 49:2  
 1325-14-0, C.I. Pigment Orange 18 1325-19-5, C.I. Pigment Red 66  
 1325-21-9, C.I. Pigment Red 65 1325-22-0, C.I. Pigment Red 67  
 1326-11-0, C.I. Pigment Yellow 18 1657-16-5, C.I. Pigment Yellow 4  
 2379-77-3, C.I. Pigment Red 189 2387-03-3, C.I. Pigment Yellow 101  
 2425-85-6, C.I. Pigment Red 3 2512-29-0, C.I. Pigment Yellow 1  
 2786-76-7, C.I. Pigment Red 170 2814-77-9, C.I. Pigment Red 4  
 3049-71-6, C.I. Pigment Red 178 3089-17-6, C.I. Pigment Red 202  
 3468-63-1, C.I. Pigment Orange 5 3520-72-7, C.I. Pigment Orange 13  
 3564-22-5, C.I. Pigment Red 18 3573-01-1, C.I. Pigment Red 209  
 3905-19-9, C.I. Pigment Red 166 4028-94-8, C.I. Pigment Yellow 123  
 4051-63-2, C.I. Pigment Red 177 4106-67-6, C.I. Pigment Yellow 5  
 4106-76-7, C.I. Pigment Yellow 6 4118-16-5, C.I. Pigment Yellow 147  
 4216-01-7, C.I. Pigment Yellow 108 4216-02-8, C.I. Pigment Red 194  
 4378-61-4, C.I. Pigment Red 168 4424-06-0, C.I. Pigment Orange 43  
 4531-49-1, C.I. Pigment Yellow 17 4948-15-6, C.I. Pigment Red 149  
 5045-40-9, C.I. Pigment Yellow 109 5102-83-0, C.I. Pigment Yellow 13  
 5160-02-1, C.I. Pigment Red 53:1 5280-66-0, C.I. Pigment Red 48:4  
 5280-67-1, C.I. Pigment Red 133 5280-68-2, C.I. Pigment Red 146  
 5280-74-0, C.I. Pigment Orange 31 5280-78-4, C.I. Pigment Red 144  
 5280-80-8, C.I. Pigment Yellow 95 5281-04-9, C.I. Pigment Red 57:1  
 5468-75-7, C.I. Pigment Yellow 14 5521-31-3, C.I. Pigment Red 179  
 5567-15-7, C.I. Pigment Yellow 83 5580-57-4, C.I. Pigment Yellow 93  
 5580-58-5, C.I. Pigment Yellow 94 5590-18-1, C.I. Pigment Yellow 110  
 5850-80-6, C.I. Pigment Red 68 5858-88-8, C.I. Pigment Orange 19  
 5979-28-2, C.I. Pigment Yellow 16 6041-94-7, C.I. Pigment Red 2  
 6358-31-2, C.I. Pigment Yellow 74 6358-37-8, C.I. Pigment Yellow 55  
 6358-40-3, C.I. Pigment Red 115 6358-47-0, C.I. Pigment Red 114  
 6358-85-6, C.I. Pigment Yellow 12 6358-87-8, C.I. Pigment Red 38  
 6358-88-9, C.I. Pigment Orange 15 6358-90-3, C.I. Pigment Red 42  
 6371-76-2, C.I. Pigment Red 64:1 6371-96-6, C.I. Pigment Orange 1  
 6372-81-2, C.I. Pigment Red 50:1 6373-10-0, C.I. Pigment Red 54  
 6410-09-9, C.I. Pigment Orange 2 6410-10-2, C.I. Pigment Red 1  
 6410-13-5, C.I. Pigment Red 6 6410-30-6, C.I. Pigment Red 8 6410-32-8, C.I. Pigment Red 12  
 6410-35-1, C.I. Pigment Red 10 6410-38-4, C.I. Pigment Red 9  
 6410-39-5, C.I. Pigment Red 15 6410-41-9, C.I. Pigment Red 5  
 6417-83-0, C.I. Pigment Red 63:1 6424-77-7, C.I. Pigment Red 190  
 6448-95-9, C.I. Pigment Red 22 6448-96-0, C.I. Pigment Red 31  
 6471-49-4, C.I. Pigment Red 23 6471-50-7, C.I. Pigment Red 14  
 6471-51-8, C.I. Pigment Red 7 6486-23-3, C.I. Pigment Yellow 3  
 6505-28-8, C.I. Pigment Orange 16 6505-29-9, C.I. Pigment Red 41  
 6528-34-3, C.I. Pigment Yellow 65 6528-35-4, C.I. Pigment Yellow 15  
 6535-46-2, C.I. Pigment Red 112 6655-84-1, C.I. Pigment Red 17  
 6883-91-6, C.I. Pigment Red 37 6985-92-8, C.I. Pigment Red 175  
 6985-95-1, C.I. Pigment Red 171 7023-61-2, C.I. Pigment Red 48:2  
 7585-41-3, C.I. Pigment Red 48:1 12224-98-5, C.I. Pigment Red 81  
 12225-06-8, C.I. Pigment Red 176 12225-18-2, C.I. Pigment Yellow 97  
 12225-21-7, C.I. Pigment Yellow 100 12227-62-2, C.I. Pigment Red 193  
 12227-78-0, C.I. Pigment Red 172 12236-62-3, C.I. Pigment Orange 36

12236-64-5, C.I. Pigment Orange 38    12238-31-2, C.I. Pigment Red 52:2  
 12768-99-9, C.I. Pigment Orange 42    13515-40-7, C.I. Pigment Yellow 73  
 14295-43-3, C.I. Pigment Red 88    14359-20-7, C.I. Pigment Yellow 113  
 15110-84-6, C.I. Pigment Yellow 87    15680-42-9, C.I. Pigment Yellow 129  
 15782-04-4, C.I. Pigment Orange 17    15782-05-5, C.I. Pigment Red 48:3  
 15790-07-5, C.I. Pigment Yellow 104    15793-73-4, C.I. Pigment Orange 34  
 15876-39-8, C.I. Pigment Red 90:1    15876-58-1, C.I. Pigment Red 174  
 17852-99-2, C.I. Pigment Red 52:1    21405-81-2, C.I. Pigment Yellow 117  
 22094-93-5, C.I. Pigment Yellow 81    24108-89-2, C.I. Pigment Red 123  
 25311-19-7, C.I. Pigment Red 68    29204-84-0, C.I. Pigment Yellow 153  
 29920-31-8, C.I. Pigment Yellow 120    30125-47-4, C.I. Pigment Yellow 138  
 31775-16-3, C.I. Pigment Yellow 170    31778-10-6, C.I. Pigment Red 208  
 31837-42-0, C.I. Pigment Yellow 151    32432-45-4, C.I. Pigment Yellow 98  
 35355-77-2, C.I. Pigment Red 63:2    36888-99-0, C.I. Pigment Yellow 139  
 40618-31-3, C.I. Pigment Red 214    43035-18-3, C.I. Pigment Red 247  
 50326-33-5, C.I. Pigment Red 243    51016-63-8, C.I. Pigment Yellow 173  
 51868-24-7, C.I. Pigment Red 90    51920-12-8, C.I. Pigment Red 185  
 52238-92-3, C.I. Pigment Red 242    52846-56-7, C.I. Pigment Orange 62  
 53815-04-6, C.I. Pigment Yellow 171    56396-10-2, C.I. Pigment Red 150  
 59487-23-9, C.I. Pigment Red 187    61013-97-6, C.I. Pigment Red 151  
 61512-61-6, C.I. Pigment Orange 51    61847-48-1, C.I. Pigment Red 188  
 61968-84-1, C.I. Pigment Yellow 116    63661-26-7, C.I. Pigment Yellow 156  
 64552-28-9, C.I. Pigment Red 58:4    68016-05-7, C.I. Pigment Red 245  
 68134-22-5, C.I. Pigment Yellow 154    68227-78-1, C.I. Pigment Red 147  
 68259-05-2, C.I. Pigment Red 220    68399-99-5, C.I. Pigment Orange 60  
 68516-73-4, C.I. Pigment Yellow 155    71566-54-6, C.I. Pigment Red 221  
 71832-85-4, C.I. Pigment Yellow 168    73385-03-2, C.I. Pigment Yellow 169  
 76233-80-2, C.I. Pigment Yellow 172    77804-81-0, C.I. Pigment Yellow 180  
 79953-85-8, C.I. Pigment Yellow 128    85702-53-0, C.I. Pigment Yellow 133  
 104074-25-1, C.I. Pigment Red 83    431991-58-1, C.I. Pigment Red 243:1  
 431991-59-2, C.I. Pigment Red 246

RL: TEM (Technical or engineered material use); USES (Uses)  
 (electrophotog. orange **toner** contg. orange colorant or mixt.  
 of yellow and red colorants)

IT **61682-73-3**

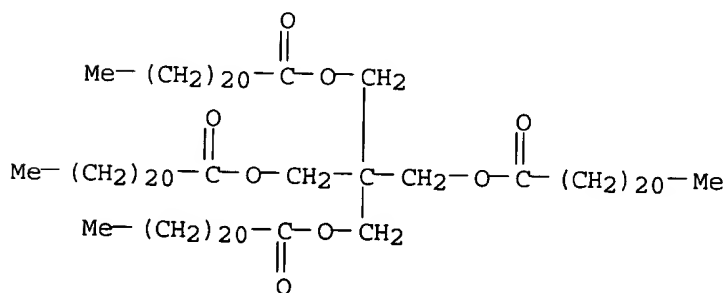
RL: TEM (Technical or engineered material use); USES (Uses)  
 (wax; electrophotog. orange **toner** contg. orange colorant or  
 mixt. of yellow and red colorants)

IT **61682-73-3**

RL: TEM (Technical or engineered material use); USES (Uses)  
 (wax; electrophotog. orange **toner** contg. orange colorant or  
 mixt. of yellow and red colorants)

RN 61682-73-3 HCAPLUS

CN Docosanoic acid, 2,2-bis[[[(1-oxodocosyl)oxy]methyl]-1,3-propanediyl ester  
 (9CI) (CA INDEX NAME)



09/987464

AN 2002:313365 HCAPLUS  
DN 136:348262  
TI **Toner** for nonmagnetic one-component development  
IN Sato, Yoshihiro; Ogura, Katsuyuki; Nakamura, Masanobu  
PA Dainippon Ink and Chemicals, Inc., Japan  
SO Jpn. Kokai Tokkyo Koho, 15 pp.  
CODEN: JKXXAF

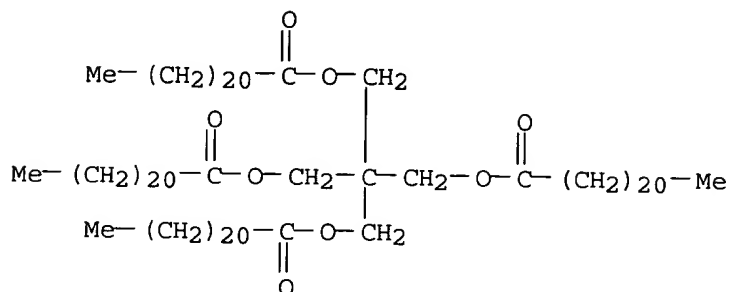
DT Patent  
LA Japanese

FAN.CNT 1

|    | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|----|--|------|----------|-----------------|----------|
|    | -----  | ---  | -----    | -----           | -----    |
| PI | JP 2002123035  | A2   | 20020426 | JP 2000-316495  | 20001017 |
|    |  |      |          | JP 2000-316495  | 20001017 |
| OS | MARPAT 136:348262  |      |          |                 |          |
| TI | <b>Toner</b> for nonmagnetic one-component development   |      |          |                 |          |
| AB | The invention relates to a <b>toner</b> for nonmagnetic one-component development which is able to charged instantly when it passes between a development sleeve and a charging material. The <b>toner</b> comprises a binder resin, a colorant, a release agent, and a charge controller, wherein (a) the binder resin is a <b>polyester</b> resin, (b) the release agent is a wax based on a higher aliph. acid ester and/or aliph. alc., and (c). |      |          |                 |          |
| ST | <b>toner</b> zirconium complex charge controller; <b>polyester</b> binder wax <b>toner</b> ; colorant <b>toner</b>   |      |          |                 |          |
| IT | Electrographic <b>toners</b><br>Electrophotographic <b>toners</b><br>(charge-controller in nonmagnetic one-component development <b>toner</b> )  |      |          |                 |          |
| IT | <b>Polyesters</b> , uses<br>RL: TEM (Technical or engineered material use); USES (Uses)<br>( <b>polyester</b> binder in nonmagnetic one-component development <b>toner</b> )   |      |          |                 |          |
| IT | Ceroplastes<br>(wax in nonmagnetic one-component development <b>toner</b> )  |      |          |                 |          |
| IT | Carnauba wax<br>RL: TEM (Technical or engineered material use); USES (Uses)<br>(wax in nonmagnetic one-component development <b>toner</b> )  |      |          |                 |          |
| IT | 2215-21-6D, zirconium oxo hydroxo complexes 7440-67-7D, Zirconium, oxo hydroxo salicylic acid complexes 19715-19-6D, 3,5-Di-tert-Butylsalicylic acid, zirconium oxo hydroxo complexes 417708-27-1<br>RL: TEM (Technical or engineered material use); USES (Uses)<br>(charge-controller in nonmagnetic one-component development <b>toner</b> )   |      |          |                 |          |
| IT | 147-14-8, KET Blue 111 980-26-7, Fastogen Super magenta R 77804-81-0, <b>Toner</b> Yellow HG VP2155<br>RL: TEM (Technical or engineered material use); USES (Uses)<br>(colorant in nonmagnetic one-component development <b>toner</b> )  |      |          |                 |          |
| IT | 165956-59-2P, Ethoxylated bisphenol a- <b>terephthalic</b> acid-trimellitic anhydride copolymer 175284-08-9P, <b>Isophthalic</b> acid-ethoxylated bisphenol a- <b>terephthalic</b> acid copolymer<br>RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)<br>( <b>polyester</b> binder in nonmagnetic one-component development <b>toner</b> )   |      |          |                 |          |
| IT | <b>61682-73-3</b> , Pentaerythritol tetrabeheenate<br>RL: TEM (Technical or engineered material use); USES (Uses)<br>(wax in nonmagnetic one-component development <b>toner</b> )  |      |          |                 |          |
| IT | <b>61682-73-3</b> , Pentaerythritol tetrabeheenate<br>RL: TEM (Technical or engineered material use); USES (Uses)<br>(wax in nonmagnetic one-component development <b>toner</b> )  |      |          |                 |          |

09/987464

RN 61682-73-3 HCAPLUS  
CN Docosanoic acid, 2,2-bis[[ (1-oxodocosyl)oxy]methyl]-1,3-propanediyl ester  
(9CI) (CA INDEX NAME)



L13 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:176325 HCAPLUS

DN 136:239040

TI Electrostatic latent image-developing **toners** with excellent thermal stability

IN Ogura, Katsuyuki; Nakamura, Masanobu

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

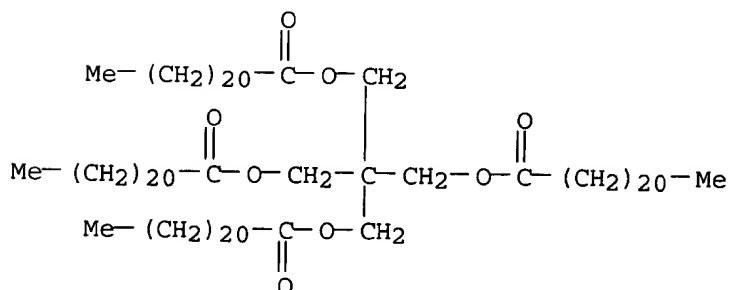
DT Patent

LA Japanese

FAN.CNT 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---|------|----------|-----------------|----------|
|    | -----   | ---- | -----    | -----           | -----    |
| PI | JP 2002072549   | A2   | 20020312 | JP 2000-252320  | 20000823 |
|    |   |      |          | JP 2000-252320  | 20000823 |
| TI | Electrostatic latent image-developing <b>toners</b> with excellent thermal stability  |      |          |                 |          |
| AB | The <b>toners</b> , giving images with good color reproducibility and transparency, contain <b>polyester</b> binders prepd. from naphthalenedicarboxylic acid and/or its lower alkyl esters and polyhydric alcs., colorants, and mold release agents preferably contg. . . .                        |      |          |                 |          |
| ST | electrophotog <b>toner polyester</b> binder color reproducibility; naphthalenedicarboxylic acid <b>polyester</b> color <b>toner</b> flowability; magnetic <b>toner</b> wax mold release agent; transparency OHP sheet <b>toner</b> thermal stability  |      |          |                 |          |
| IT | Binders<br>Color electrophotographic <b>toners</b><br>(electrophotog. <b>toners</b> contg. <b>polyester</b> binders, colorants, and mold release agents with good thermal stability and transparency)   |      |          |                 |          |
| IT | <b>Polyesters</b> , preparation<br>RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)<br>(electrophotog. <b>toners</b> contg. <b>polyester</b> binders, colorants, and mold release agents with good thermal stability and transparency) |      |          |                 |          |
| IT | Carnauba wax<br>RL: TEM (Technical or engineered material use); USES (Uses)<br>(electrophotog. <b>toners</b> contg. <b>polyester</b> binders, colorants, and mold release agents with good thermal stability and transparency)  |      |          |                 |          |
| IT | Parting materials   |      |          |                 |          |

- (mold-release agents; electrophotog. **toners** contg. **polyester** binders, colorants, and mold release agents with good thermal stability and transparency)
- IT Paraffin waxes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**toner** contg.; electrophotog. **toners** contg. **polyester** binders, colorants, and mold release agents with good thermal stability and transparency)
- IT Electrophotographic **toners**  
(two-component developer **toners**; electrophotog. **toners** contg. **polyester** binders, colorants, and mold release agents with good thermal stability and transparency)
- IT 402939-72-4P, Cyclohexanedimethanol-ethylene glycol-naphthalenedicarboxylic acid-neopentyl glycol-**terephthalic** acid copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(electrophotog. **toners** contg. **polyester** binders, colorants, and mold release agents with good thermal stability and transparency)
- IT 147-14-8, KET Blue 111 980-26-7, Fastogen Super Magenta R 77804-81-0, **Toner** Yellow HG VP 2155 173195-22-7, **Isophthalic** acid-propoxylated bisphenol A-**terephthalic** acid-trimethylolpropane copolymer 402939-46-2, Cyclohexanedimethanol-diethylene glycol-dodecenylsuccinic acid-naphthalenedicarboxylic acid-neopentyl glycol-**terephthalic** acid copolymer 402939-73-5, Cyclohexanedimethanol-diethylene glycol-**isophthalic** acid-naphthalenedicarboxylic acid-neopentyl glycol-**terephthalic** acid copolymer 402939-74-6, Cyclohexanedimethanol-diethylene glycol-**isophthalic** acid-naphthalenedicarboxylic acid-neopentyl glycol-**terephthalic** acid-trimethylolpropane copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(electrophotog. **toners** contg. **polyester** binders, colorants, and mold release agents with good thermal stability and transparency)
- IT 9010-79-1, Viscol 550P **61682-73-3**, Pentaerythritol tetrabehenate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(wax; electrophotog. **toners** contg. **polyester** binders, colorants, and mold release agents with good thermal stability and transparency)
- IT **61682-73-3**, Pentaerythritol tetrabehenate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(wax; electrophotog. **toners** contg. **polyester** binders, colorants, and mold release agents with good thermal stability and transparency)
- RN 61682-73-3 HCAPLUS
- CN Docosanoic acid, 2,2-bis[[[(1-oxodocosyl)oxy]methyl]-1,3-propanediyl ester (9CI) (CA INDEX NAME)



L13 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:176324 HCAPLUS

DN 136:239039

TI Electrostatic latent image-developing **toners** containing **polyester** binders with excellent thermal stability

IN Ogura, Katsuyuki; Nakamura, Masanobu

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN. CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
| PI | JP 2002072548 | A2   | 20020312 | JP 2000-252319  | 20000823 |
|    |               |      |          | JP 2000-252319  | 20000823 |

OS MARPAT 136:239039

TI Electrostatic latent image-developing **toners** containing **polyester** binders with excellent thermal stability

AB The **toners**, giving images with good color reproducibility and transparency, contain colorants and **polyester** binders prepd. from (A) naphthalenedicarboxylic acid and/or its lower alkyl esters, (B) .gtoreq.1 mol% (on total acid components) dicarboxylic acids. . . + R2 + R3 = 3-20) and/or their lower alkyl esters and/or their anhydrides, and (C) polyhydric alcs. Alternatively, the **polyester** binders are prepd. from A, C, and (D) .gtoreq.1 mol% (on total alc. components) diols HOCHR4XCHR5OH (X = same as. . .

ST electrophotog **toner polyester** binder color reproducibility; naphthalenedicarboxylic acid **polyester** binder **toner** flowability; electrostatic image developer **toner** thermal stability; transparency OHP sheet color **toner** copier

IT Binders

Color electrophotographic **toners**

(electrostatic latent image-developing **toners** contg.

**polyester** binders and colorants with good thermal stability and transparency)

IT **Polyesters**, preparation

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(electrostatic latent image-developing **toners** contg.

**polyester** binders and colorants with good thermal stability and transparency)

IT Carnauba wax

Paraffin waxes, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(**toner** contg.; electrostatic latent image-developing

**toners** contg. **polyester** binders and colorants with good thermal stability and transparency)

IT Electrophotographic **toners**

(two-component developer **toners**; electrostatic latent

image-developing **toners** contg. **polyester** binders and colorants with good thermal stability and transparency)

IT 402939-44-0P, Dodecenylsuccinic acid-naphthalenedicarboxylic acid-propoxylated bisphenol A-**terephthalic** acid copolymer  
402939-45-1P, Cyclohexanedimethanol-dodecenylsuccinic acid-ethylene glycol-naphthalenedicarboxylic acid-neopentyl glycol-**terephthalic** acid copolymer 402939-46-2P, Cyclohexanedimethanol-diethylene glycol-dodecenylsuccinic acid-naphthalenedicarboxylic acid-neopentyl glycol-**terephthalic** acid copolymer 402939-47-3P, 1,12-Dodecanediol-**isophthalic** acid-naphthalenedicarboxylic



acid-propoxylated bisphenol A-**terephthalic** acid copolymer  
 402939-48-4P, Cyclohexanedimethanol-1,2-decanediol-dipropylene glycol-  
**isophthalic** acid-naphthalenedicarboxylic acid-neopentyl glycol-  
**terephthalic** acid copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(electrostatic latent image-developing **toners** contg.

**polyester** binders and colorants with good thermal stability and transparency)

IT 147-14-8, KET Blue 111 980-26-7, Fastogen Super Magenta R 77804-81-0, **Toner** Yellow HG VP 2155

RL: TEM (Technical or engineered material use); USES (Uses)

(electrostatic latent image-developing **toners** contg.

**polyester** binders and colorants with good thermal stability and transparency)

IT 9010-79-1, Viscol 550P **61682-73-3**, Pentaerythritol tetrabehenate

RL: TEM (Technical or engineered material use); USES (Uses)

(wax, **toner** contg.; electrostatic latent image-developing

**toners** contg. **polyester** binders and colorants with good thermal stability and transparency)

IT **61682-73-3**, Pentaerythritol tetrabehenate

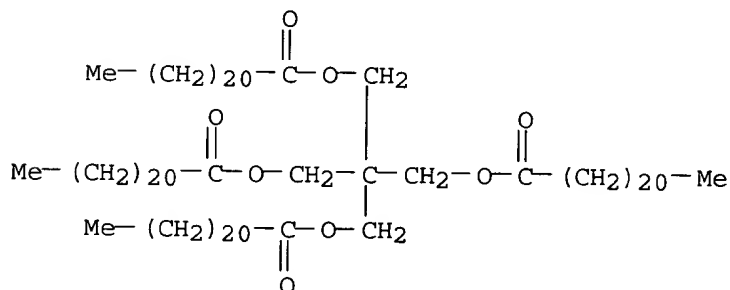
RL: TEM (Technical or engineered material use); USES (Uses)

(wax, **toner** contg.; electrostatic latent image-developing

**toners** contg. **polyester** binders and colorants with good thermal stability and transparency)

RN 61682-73-3 HCAPLUS

CN Docosanoic acid, 2,2-bis[[[(1-oxodocosyl)oxy]methyl]-1,3-propanediyl ester (9CI) (CA INDEX NAME)



L13 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:153072 HCAPLUS

DN 136:207648

TI Electrophotographic development magenta **toner** showing excellent color reproduction, fixability, and offset-resistance

IN Ogura, Katsuyuki; Nakamura, Masanobu

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

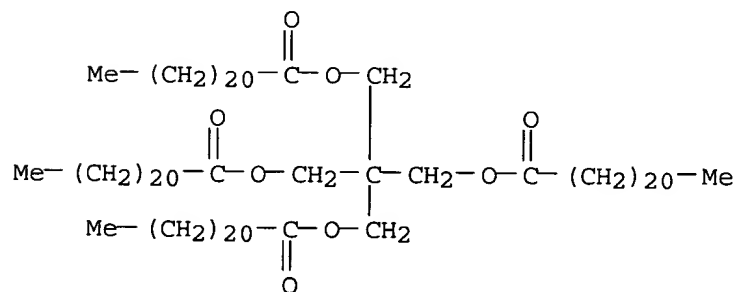
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|    | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|----|--|------|----------|-----------------|----------|
|    | -----  | ---  | -----    | -----           | -----    |
| PI | JP 2002062689  | A2   | 20020228 | JP 2000-250961  | 20000822 |
|    |  |      |          | JP 2000-250961  | 20000822 |
| TI | Electrophotographic development magenta <b>toner</b> showing excellent color reproduction, fixability, and offset-resistance |      |          |                 |          |



09/987464

TI Full-color **toner** for nonmagnetic one-component developer  
IN Nakamura, Masanobu; Yoshida, Masahiro; Otsuka, Shunichi; Ogura, Katsuyuki  
PA Dainippon Ink and Chemicals, Inc., Japan  
SO Jpn. Kokai Tokkyo Koho, 17 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese

FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO.  | DATE     |
|----|---------------|------|----------|------------------|----------|
| PI | JP 2002006555 | A2   | 20020109 | JP 2001-122647   | 20010420 |
|    |               |      |          | JP 2000-120852 A | 20000421 |

OS MARPAT 136:93465

TI Full-color **toner** for nonmagnetic one-component developer

AB The title **toner** comprises a binder resin, a colorant, and a wax, wherein (a) the binder resin is a **polyester** having an acid value 5-30 and a ratio of an acid value (AV) to a hydroxyl value (OHV) (OHV/AV) 1.0-10.0, . . .

ST full color **toner** wax **polyester**

IT **Polyesters**, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(binder resin; full-color **toner** for nonmagnetic one-component developer)

IT Electrophotographic **toners**

(full-color **toner** for nonmagnetic one-component developer)

IT 138693-40-0P, **Isophthalic** acid-ethoxylated bisphenol

A-propoxylated bisphenol A-**terephthalic** acid-trimellitic acid

copolymer 147584-29-0P, Ethylene glycol-**isophthalic**

acid-ethoxylated bisphenol A-propoxylated bisphenol A-**terephthalic**

acid-trimellitic acid copolymer 150294-10-3P, **Isophthalic**

acid-ethoxylated bisphenol A-propoxylated bisphenol A-**terephthalic**

acid copolymer 158326-17-1P, Ethylene glycol-**isophthalic**

acid-ethoxylated bisphenol A-propoxylated bisphenol A-**terephthalic**

acid copolymer 175284-08-9P, **Isophthalic** acid-ethoxylated

bisphenol A-**terephthalic** acid copolymer

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(binder resin; full-color **toner** for nonmagnetic one-component developer)

IT 555-43-1 1119-74-0 61682-72-2 **61682-73-3** 344753-05-5

RL: TEM (Technical or engineered material use); USES (Uses)

(wax; full-color **toner** for nonmagnetic one-component developer)

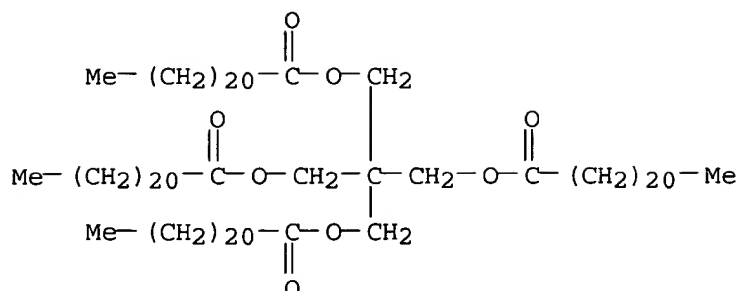
IT **61682-73-3**

RL: TEM (Technical or engineered material use); USES (Uses)

(wax; full-color **toner** for nonmagnetic one-component developer)

RN 61682-73-3 HCAPLUS

CN Docosanoic acid, 2,2-bis[[[(1-oxodocosyl)oxy]methyl]-1,3-propanediyl ester (9CI) (CA INDEX NAME)



L13 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2003 ACS

AN 2001:796491 HCAPLUS

DN 135:350492

TI Electrostatographic **toners** with improved anti-offset characteristics.

IN Nakamura, Masanobu; Karibayashi, Hideki

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
| PI | JP 2001305799 | A2   | 20011102 | JP 2000-125643  | 20000426 |
|    |               |      |          | JP 2000-125643  | 20000426 |

OS MARPAT 135:350492

TI Electrostatographic **toners** with improved anti-offset characteristics.

AB The disclosed **toners** comprises **polyester** resin binders, triboelec. charge controlling agent selected from nigrosine dyes or quaternary ammonium salts, and carboxylic acid ester type waxes having .gtoreq. 1 C12-40 hydrocarbonyl groups. The **toners** exhibit excellent fix-ability, stable triboelec. charge, and anti-offset characteristics.

ST electrostatog **toner** binder charge controller wax; electrophotog **toner** binder charge controller wax

IT Electrographic **toners**

Electrophotographic **toners**

(binder resin, triboelec. charge controller and waxes for)

IT **Polyesters**, preparation

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(electrophotog **toner** binder resin)

IT 555-43-1 61682-72-2 **61682-73-3** 344753-05-5

RL: DEV (Device component use); USES (Uses)

(electrostatog. **toners** contg. ester-type waxes)

IT 124997-00-8P, Ethylene glycol-**isophthalic** acid-propoxylated

bisphenol A-**terephthalic** acid-trimethylolpropane copolymer

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(**polyester** binder resin for electrostatog. **toners**)

IT 84135-36-4, Bontron N-01 88895-08-3, Bontron N-04 102561-46-6

142051-76-1 142052-00-4

RL: DEV (Device component use); USES (Uses)

(triboelec. charge controlling agent for electrostatog. **toners**)

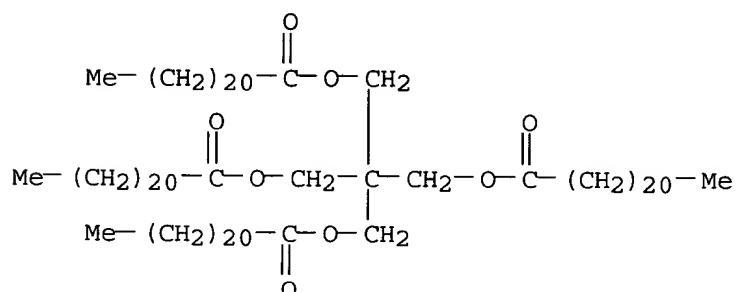
IT **61682-73-3**

09/987464

RL: DEV (Device component use); USES (Uses)  
(electrostatog. **toners** contg. ester-type waxes)

RN 61682-73-3 HCAPLUS

CN Docosanoic acid, 2,2-bis[[ (1-oxodocosyl)oxy]methyl]-1,3-propanediyl ester  
(9CI) (CA INDEX NAME)



L13 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2003 ACS

AN 2001:376882 HCAPLUS

DN 134:359511

TI **Toner** for electrostatic image development and image forming  
method employing the same

IN Gambayashi, Hideki; Nakamura, Masanobu; Kogawara, Toshiro; Amaya, Shinji

PA Dainippon Ink and Chemicals, Inc., Japan

SO Eur. Pat. Appl., 40 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|---|------|----------|------------------|----------|
| EP 1102127  | A2   | 20010523 | EP 2000-117305   | 20000818 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO |      |          |                  |          |
| JP 2001215756   | A2   | 20010810 | JP 1999-330977 A | 19991122 |
|   |      |          | JP 2000-147962   | 20000519 |
|   |      |          | JP 1999-330977 A | 19991122 |
| US 6335139  | B1   | 20020101 | US 2000-642936   | 20000822 |
|   |      |          | JP 1999-330977 A | 19991122 |

TI **Toner** for electrostatic image development and image forming  
method employing the same

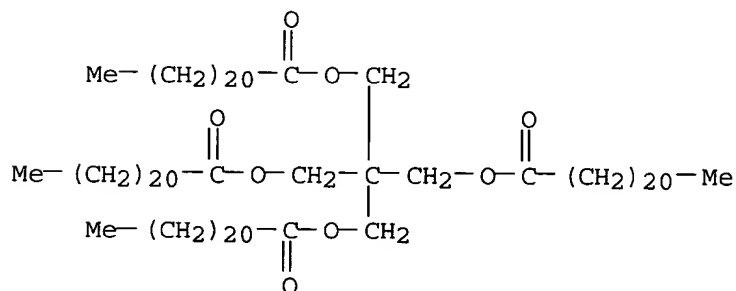
AB The present invention provides a **toner** for electrostatic image development which reconciles anti-offset properties and fixation properties and is superior in resistance to abrasion and peel. . . are conducted at a wide range of a fixing speed, particularly high speed which exceeds 20 or 30 m/min. The **toner** comprises a **polyester** resin, a colorant, and a releasing agent, wherein the flow beginning temp. Tfb of the **toner** as measured by a const. load extrusion type capillary rheometer is within a range of 70-105 .degree.C and the flow. .

ST electrophotog **toner** binder resin releasing agent colorant;  
**polyester** resin; charge control agent; wax

IT Carbon black, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Black Pearls 460; colorant in electrophotog. **toners**)

IT Paraffin waxes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Sasolwax H 1; releasing agent in electrophotog. **toners**)

- contg.)
- IT **Polyesters**, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(binder resin in electrophotog. **toners** contg.)
- IT Paraffin waxes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(microcryst., oxidized, NPS 9210; releasing agent in electrophotog. **toners** contg.)
- IT Carnauba wax  
RL: TEM (Technical or engineered material use); USES (Uses)  
(releasing agent in electrophotog. **toners** contg.)
- IT Electrophotographic **toners**  
(**toner** for electrostatic image development)
- IT 1317-61-9, Iron oxide (Fe<sub>3</sub>O<sub>4</sub>), uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(BL 200; colorant in electrophotog. **toners**)
- IT 53808-42-7P, **Terephthalic** acid-ethylene glycol-neopentyl glycol-trimethylolpropane copolymer 79293-17-7P, **Terephthalic** acid-ethylene glycol-ethoxylated bisphenol A copolymer 88285-63-6P, **Terephthalic** acid-ethylene glycol-propoxylated bisphenol A copolymer 124997-00-8P 125072-23-3P, **Terephthalic** acid-ethylene glycol-propoxylated bisphenol A-trimethylolpropane copolymer 141140-88-7P, **Terephthalic** acid-isophthalic acid-ethylene glycol-propoxylated bisphenol A-trimellitic acid copolymer 339205-21-9P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(binder resin in electrophotog. **toners** contg.)
- IT 88895-08-3, Bontron N 04  
RL: TEM (Technical or engineered material use); USES (Uses)  
(charge control agent in electrophotog. **toners**)
- IT 9010-79-1, Viscol 550P **61682-73-3**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(releasing agent in electrophotog. **toners** contg.)
- IT **61682-73-3**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(releasing agent in electrophotog. **toners** contg.)
- RN 61682-73-3 HCAPLUS
- CN Docosanoic acid, 2,2-bis[[[(1-oxodocosyl)oxy]methyl]-1,3-propanediyl ester (9CI) (CA INDEX NAME)



09/987464

SO U.S., 10 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
| PI | US 5567563    | A    | 19961022 | US 1995-482543  | 19950607 |
|    | EP 749048     | A1   | 19961218 | EP 1995-109055  | 19950612 |
|    | EP 749048     | B1   | 20011010 |                 |          |
|    | R: DE, FR, GB |      |          |                 |          |
|    | CN 1139222    | A    | 19970101 | US 1995-482543  | 19950607 |
|    |               |      |          | CN 1995-107655  | 19950623 |
|    |               |      |          | US 1995-482543  | 19950607 |

TI Electrophotographic **toner** binder composition

ST binder compn org particle electrophotog **toner**

IT Electrophotographic **toners**

(binder resins contg. dispersed org. particles for)

IT Acrylic polymers, uses

Epoxy resins, uses

Hydrocarbon waxes, uses

Phenolic resins, uses

Polyamides, uses

**Polyesters**, uses

Polysiloxanes, uses

Polyurethanes, uses

Waxes

RL: TEM (Technical or engineered material use); USES (Uses)

(electrophotog. **toners** with binder resin compns. contg.)

IT 110-31-6, N,N'-Ethylenebisoleylamide **115-83-3**, Pentaerythritol  
 tetrastearate 9003-53-6, Polystyrene 126034-89-7, Ethoxylated  
 Bisphenol A-propoxylated Bisphenol A-**terephthalic** acid copolymer

RL: TEM (Technical or engineered material use); USES (Uses)

(electrophotog. **toners** with binder resin compns. contg.)

IT 9002-88-4, Polyethylene

RL: TEM (Technical or engineered material use); USES (Uses)

(wax; electrophotog. **toners** with binder resin compns. contg.)

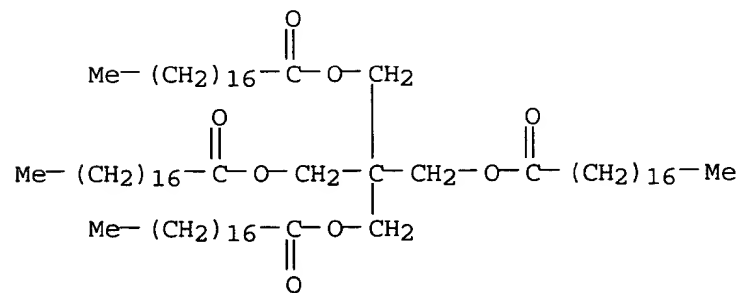
IT **115-83-3**, Pentaerythritol tetrastearate

RL: TEM (Technical or engineered material use); USES (Uses)

(electrophotog. **toners** with binder resin compns. contg.)

RN 115-83-3 HCAPLUS

CN Octadecanoic acid, 2,2-bis[[[1-oxooctadecyl)oxy)methyl]-1,3-propanediyl  
 ester (9CI) (CA INDEX NAME)



09/987464

L1 ANSWER 1 OF 1 CA COPYRIGHT 2003 ACS  
AN 137:270494 CA  
TI Electrophotographic toner and image forming method  
IN Nakamura, Yasushige; Takahashi, Toru; Watanuki, Tsuneo; Sawatari, Norio;  
Ishimaru, Seijiro; Furuse, Yasuyuki  
PA Fujitsu Limited, Japan  
SO U.S. Pat. Appl. Publ., 25 pp., Cont.-in-part of Appl. No. PCT/JP00/01678.  
CODEN: USXXCO  
DT Patent  
LA English

FAN.CNT 2

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE         |
|------|--|------|----------|-----------------|--------------|
|      | -----  | ---- | -----    | -----           | -----        |
| PI   | US 2002136974  | A1   | 20020926 | US 2001-987464  | 20011114 <-- |
|      | WO 2001006322  | A1   | 20010125 | WO 2000-JP1678  | 20000317     |
|      | W: JP, US  |      |          |                 |              |
|      | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE |      |          |                 |              |
| PRAI | WO 2000-JP1678   | A2   | 20000317 |                 |              |
|      | WO 1999-JP3822   | W    | 19990715 |                 |              |